Claims

[c1]

1.A device providing for a display screen and performing predetermined processing by operating a pointer displayed on the display screen, the device comprising:

a display controller for controlling a display position of the pointer on the display screen;

a displacement detector for detecting a displacement of the device itself; and

a pointer moving device for moving the pointer on the display screen based on the detected displacement of the device itself.

[c2]

2.The device according to claim 1, wherein the displacement detector comprising an image sensor, wherein an image sensed by the image sensor is processed to obtain a displacement of the device itself.

[c3]

3.The device according to claim 2, wherein the image sensor comprising a complementary metal-oxide semiconductor or a charge coupled device.

[c4]

4.The device according to claim 2, wherein the image sensor comprising an infrared sensor.

[c5]

5.The device according to claim 2, further comprising an operator for activating the image sensor.

[c6]

6.The device according to claim 5, wherein the operator further includes the function for directing a selection of an object pointed to by the pointer or for the execution of predetermined processing defined for the object, whereby the operator has a plurality of functions.

[c7]

7.The device according to claim 1, wherein the device is of a wristwatch type.

[c8]

8.A wristwatch type device, comprising:

a display for displaying a screen;

a case for supporting the display;

an attached belt attached to the case; and

a touch sensor mounted in the case or the attached belt for performing a

predetermined operation on an object displayed on the screen.

[c9]   9.The wristwatch type device according to claim 8, wherein the touch sensor is provided on both sides of the display.

[c10]   10.The wristwatch type device according to claim 8, further comprising: displacement detection section for detecting a displacement of the display; and pointer position changing device for changing a display position of a pointer based on the detected results, thereby moving the pointer displayed on the screen.

[c11]   11.A method for moving a position of a pointer displayed in a display of a device, comprising:
a first step of taking an image of a physical object facing the device continuously and detecting a relative displacement between the taken object and the display; and
a second step for changing a display position of the pointer displayed on the display based on the detected displacement.

[c12]   12.The method according to claim 11, wherein the first step further comprising the steps of:
calculating a motion vector at a certain place in an image based on the movement of the image that was taken multiple times; and
obtaining a relative displacement between the object and the display based on the calculated motion vector.

[c13]   13.The method according to claim 12, when moving the device relative to the object, the relative displacement between the object and the display is obtained by inverting a sign of the motion vector.

[c14]   14.The method according to claim 11, wherein the first step comprising the steps of:
generating a time-series moving pattern of a certain place based on a position of the certain place in a principal image and a position of a place corresponding to the certain place in a plurality of other images that were taken apart in time

from the principal image; and

comparing the generated time-series moving pattern with a plurality of model patterns registered in advance to select a most approximate model pattern; wherein the second step comprising the steps of changing a display position of the pointer based on a moving pattern that was defined for the selected model pattern.

[c15]   15.A method for moving a pointer displayed in a display of a device, comprising the steps of:

detecting a displacement of the device when moving the device; and

changing a display position of the pointer displayed in the display based on the detected displacement.

[c16]   16.The method according to claim 15, further comprising the steps of starting to detect a displacement of the device when a predetermined startup operation is performed by a user.